

Name: _____
PC: Decomposition Homework

Date: _____
Ms. Loughran

For 1 – 4, express the function in the form $f \circ g \circ h$.

1. $F(x) = \sqrt[3]{\sqrt{x} - 1}$

2. $F(x) = (4 + \sqrt[3]{x})^9$

3. $F(x) = \frac{2}{(3 + \sqrt{x})^2}$

4. $F(x) = \sqrt[4]{x^3 + 9}$

5. Find the functions f and g so that $h(x) = (f \circ g)(x)$

(a) $h(x) = (x - 1)^3 - 2$

(b) $h(x) = 2(x + 1)^2 + 3$

(c) $h(x) = \frac{x + 1}{x + 2}$

6. Find the functions f , g and h so that $F(x) = (f \circ g \circ h)(x)$

$$F(x) = \sqrt{(x^2 - 3x)^5}$$